

10

## 1 Claims:

2 1 A casing centraliser comprising an annular body,  
3 the annular body having a substantially cylindrical  
4 bore extending longitudinally therethrough, the annular  
5 body being formed from at least one material selected  
6 from the group consisting of plastic material,  
7 elastomeric material and rubber material, the  
8 substantially cylindrical bore being a clearance fit  
9 around the tubular casing to be centralised by the  
10 centraliser.

11  
12 2 A casing centraliser as claimed in claim 1 wherein  
13 the material is selected from the group consisting of  
14 polytetrafluoroethylene (PTFE), polyetheretherketone,  
15 carbon reinforced polyetheretherketone,  
16 polyphthalamide, polyvinylidene fluoride,  
17 polyphenylene sulphide, polyetherimide, polyethylene,  
18 polysulphone, polyethersulphone,  
19 polybutyleneterephthalate, polyetherketoneketone,  
20 polyamides, rubber & rubber compounds, phenolic resins  
21 or compounds, thermosetting plastics, thermoplastic  
22 elastomers, thermoplastic compounds and thermoplastic  
23 polyester resins.

24  
25 3 A casing centraliser as claimed in claim 1,  
26 wherein the material contains a filler material.

27  
28 4 A casing centraliser as claimed in claim 3 wherein  
29 the filler material is selected from the group  
30 consisting of glass, carbon, PTFE, silicon, molybdenum  
31 disulphide, graphite, oil and wax.

32  
33 5 A casing centraliser assembly as claimed in claim  
34 1, wherein the annular body is of unitary construction.  
35

12

11

1 <sup>5</sup>/<sub>8</sub> A casing centraliser<sup>2</sup> as claimed in claim 1,  
2 wherein the annular body comprises a combination of at  
3 least two different materials.

4  
5 ~~7~~ A casing centraliser<sup>2</sup> as claimed in claim 1,  
6 wherein the annular body comprises a metal skeleton at  
7 least partially coated with said material.

8  
9 <sup>6</sup>/<sub>8</sub> A casing centraliser<sup>2</sup> as claimed in claim 1, having  
10 a peripheral array of a plurality of longitudinally  
11 extending blades circumferentially distributed around  
12 the body of the centraliser<sup>2</sup> to define a flow path  
13 between each circumferentially adjacent pair of said  
14 blades, each said flow path providing a fluid flow path  
15 between longitudinally opposite ends of said  
16 centraliser<sup>2</sup>, each said blade having a radially outer  
17 edge providing a well bore-contacting surface.

18  
19 <sup>7</sup>/<sub>8</sub> A casing centraliser<sup>2</sup> as claimed in claim ~~8~~<sup>6</sup>,  
20 wherein the blades are mutually substantially  
21 equidistantly distributed around the body.

22  
23 <sup>8</sup>/<sub>10</sub> A casing centraliser<sup>2</sup> as claimed in claim ~~8~~<sup>6</sup>,  
24 wherein the blades each extend circumferentially at  
25 least part-way around said body between longitudinally  
26 opposite ends thereof to provide a circumferential  
27 distribution of each said well bore-contacting surface.

28  
29 <sup>9</sup>/<sub>11</sub> A casing centraliser<sup>2</sup> as claimed in claim ~~8~~<sup>6</sup>,  
30 wherein each blade has a radially inner root integral  
31 with said body, each said radially inner root  
32 preferably being circumferentially wider than the  
33 respective radially outer edge.

34  
35 <sup>10</sup>/<sub>12</sub> A casing centraliser as claimed in claim ~~8~~<sup>6</sup>

13

1 wherein the blades are circumferentially wider at a  
2 lower end of the centralizer than at the upper end.

3 <sup>71</sup>  
4 ~~48~~ A casing centraliser as claimed in claim <sup>3</sup> ~~8~~ <sup>6</sup>  
5 wherein said centraliser <sup>3</sup> has five of said blades.

6 ~~12~~  
7 ~~12~~ A casing centralizer<sup>2</sup> as claimed in claim 1,  
8 substantially free of any means tightly gripping a  
9 casing when said centralizer<sup>2</sup> is installed thereon,  
10 whereby said centralizer<sup>2</sup> and said casing are mutually  
11 rotatable.

12 <sup>13</sup>  
13 ~~15~~ A casing centralizer<sup>2</sup> assembly comprising tubular  
14 casing and a centralizer<sup>2</sup> as claimed in claim 1.

~~16 A casing centraliser as claimed in claim 1,~~  
~~wherein the annular body is divided along its axis into~~  
~~at least two inter-connectable sections.~~

19 <sup>15</sup> <sup>2</sup> <sup>14</sup>  
20 ~~17~~ A casing centraliser as claimed in claim 18,  
21 wherein each of said at least two inter-connectable  
22 sections is adapted to allow the centraliser<sup>2</sup> to be  
23 placed around the tubular without needing to be  
24 threaded over an end of the tubular.

25 <sup>16</sup>  
26 <sup>2</sup> ~~18~~ A casing centralizer as claimed in claim ~~18~~, <sup>14</sup>  
27 wherein the division between the sections is not axial.

28 ~~17~~ 17 A casing centraliser<sup>3</sup> as claimed in claim 1~~8~~ 18,  
29 wherein the sections are hingedly attached to one  
30 another.  
31

32 <sup>18</sup>  
33 ~~20~~<sup>2</sup> A casing centralizer as claimed in claim ~~18~~<sup>14</sup>,  
34 wherein the sections are held together by fixings.

35

14